

Burr (C. B.)

COCCULUS INDICUS IN EPILEPSY.

BY C. B. BURR, M. D.,

Assistant Physician in the Eastern Michigan Asylum for the Insane at Pontiac.



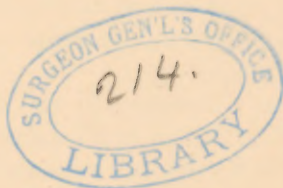
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Opinions are conflicting as to the utility of this drug as a remedy for epilepsy. It is not an agent in common use, nor one extensively studied, as indicated by the dearth of literature upon it.

Some recent text-books mention it briefly, but in so slight esteem has it heretofore been held as a remedy adapted for internal administration that in the last edition of Wood and Bache, the statement is made that it is never given in this manner.

The late National Dispensatory, however, cites authorities that claim for it great efficacy in the treatment of epilepsy. Sixteen recoveries under its use are said to have been reported by one observer, who asserts that the only exceptions to its curative value are cases of inveterate and long standing disease.

A study of the effects of the drug, as administered in several cases under his observation, has convinced the writer that *Cocculus Indicus* possesses remedial value in this disease, and it is with the desire of calling the attention of the profession to the importance of the drug as a therapeutic agent, that this paper is presented to the Society.

All will admit with regret that ill success as a rule attends our efforts to cure epilepsy. Leaving out of consideration those cases where a reflex or traumatic cause for the disease exists, of a temporary nature, or removable by surgical measures, our resources in the treatment of epilepsy are limited to the administration of a few well-tried remedies, the effect of which is as a rule but to temporarily ameliorate symptoms, or to postpone convulsive seizures and

not to arrest the progress of the disease. Those cases of epilepsy occurring as sequelæ of certain acute diseases in which convulsions persist, and the habit seems to become formed (so to speak), as likewise that of spontaneous origin, occurring in both sexes at or about the period of puberty, are difficult to control and frequently defy all measures adopted for their relief. The course of the disease is well known to every practitioner of medicine, and to detain you with a description of how progressive impairment of mental integrity occurs, terminating in many cases in hopeless dementia, would be but to recite details familiar to you all, and is without the scope of the present paper. It is in order, however, for me to refer briefly to the mental disorders common to many epileptics, as it is to the class in which these disorders prevail that my experience with *Cocculus Indicus* is confined.

The cases received at the asylum are, as a rule, those of chronic, confirmed disease, requiring seclusion and restraint of liberty in consequence of great mental enfeeblement, or propensities which render them dangerous to society. They are cases in which outbreaks of maniacal fury occur at stated intervals in definite relation to epileptic seizures. Or again those in which profound depression follows the convulsive seizures, and suicidal propensities are developed. They are almost without exception extremely irritable, disposed to do impulsive acts, and deficient in self-control. In each, mental impairment is more or less strongly pronounced, and all are regarded unhopeful in respect to prognosis.

The majority of these cases have been under medical treatment for years, and most all of the orthodox medicines have at one time or another been administered, the hope of cure ultimately being abandoned.

Under these circumstances it is not surprising that we have no recoveries to report. The fact remains, however, that striking results have followed the use of *Cocculus Indicus* in a certain class of cases, and the query arises—would these patients have been benefited permanently by the same line of treatment instituted at an earlier period?

Of ten cases of epilepsy in its various forms, five were found to have derived substantial benefit. It will be observed that a striking similarity exists between the symptoms manifested by each.

B. M., age 37, male, was admitted to the asylum in January, 1880. He possessed a ~~maniac~~^{hereditary} organization, inherited from his parents who were cousins. One of his brothers is a deaf mute, another brother and a sister are partially mute. He himself was never bright, and had no education, but was able to assist in providing for himself until five years ago, at which time he received an injury while logging. Shortly afterward he began to suffer from convulsions. At first they occurred once in four or five weeks, later they became more frequent, and at the time of admission, come on twice a week. He was placed in the institution owing to pyromaniacal and homicidal impulses, and was brought securely tied with straps and in a very much excited state. Convulsions were very frequent after admission and attended by great mental confusion. He was also extremely irritable and impulsive, was subject to hallucinations of vision and entertained persistent delusions of suspicion and distrust. Once in four or six weeks, with great regularity, he would undergo an attack of maniacal excitement. During an outbreak there would be utter absence of self-control, active delusions of poison, untidiness of habit, and an augmentation of the unpleasant characteristics noted. He required restraints to prevent homicidal acts, and was rendered furious by the sight of visitors. Paroxysms lasted as a rule for more than a week, and upon their subsidence mental confusion, vague delusions of apprehension, and excessive irritability would persist for a longer period. At these times he would prefer charges against the attendants and his fellow patients, and in an earnest manner recite the details of various beatings undergone at their hands, usually terminating the recital by the solemn asseveration that they chopped his head off and killed him many times. He did but little work, his relations with other patients were unpleasant, and his condition demanded great care on the part of the attendants.

Six months ago the administration of Coccus Indicis was begun by the exhibition of one-fourth drop of the fluid extract three times a day. The amount was gradually increased. About four weeks from the time the prescription was made, at about the regular time for an attack, he was threatened with maniacal excitement, mental confusion existed in a greater degree, and self-control was diminished.

This condition was of very brief duration, and terminated with-

out an actual outbreak. Two weeks later a similar condition was observed, but again active excitement was happily averted.

His mental action constantly improved, he began to show interest in other patients, gave considerable assistance in hall work, became less irritable, and was able to exercise self-control even under provocation.

In the middle of November, four months from the time the prescription was made, he suffered from a mild attack of excitement. Its duration was brief. After this attack there was no farther outbreak for nearly five months. The seizure which then occurred was like the preceding one, short and attended by a less complete absence of self-control. He is now taking grt. $1\frac{1}{2}$ of fluid extract *Cocculus Indicus* three times a day.

The aggregate number of convulsions in any month is materially decreased. His attendant notices that the attacks are less severe than formerly, and that mental confusion does not last as long thereafter. He also speaks of what is plainly apparent to all, that the patient seems clearer in mind, and that many of his former characteristics are changed. He continues an industrious, pleasant man, and rarely occasions trouble in the hall.

J. T., female, age 54, had suffered from epilepsy for thirty-four years, and at the time of her admission was subject to daily convulsive seizures. These were invariably followed by great irritability and demonstrations of violence. She would kick, strike and bite, and remain for a variable length of time in a state of furious excitement. She was untidy in habits, vulgar in conversation, and her case involved great personal discomfort to attendants and patients. Under the use of *Cocculus Indicus* important changes have occurred in her mental condition. Her convulsions are much less frequent, and very rarely succeeded by excitement. Her habits have improved, and her attendants speak with pleasure of the milder character of convulsions and the general improvement in her condition.

A third case which came under observation was characterized by regularly recurring outbreaks of maniacal excitement with series of convulsive attacks. In the interval the patient (a male) suffered from petit mal and was accustomed to have from one to three or more modified convulsions in twenty-four hours. The potency of the medicine in this instance was shown by the fact

that after its exhibition for a short time the attacks of petit mal entirely ceased and were held in check for a number of weeks. At the end of this time, however, a hard convulsion occurred. The patient is now taking gtt. j. of the fluid extract t. i. d. His convulsions have been fewer in number than the corresponding months of the previous year, and he himself places great reliance upon the remedy. In this case a profound degree of dementia had previously not been reached. The patient's mind is brighter, and his irritability, a marked feature at first, perceptibly lessened.

In the following case a marked diminution in the number and severity of convulsions was speedily manifest. The patient, a male, had in the three months immediately preceding the prescription, nineteen convulsions as follows—in June, 9; in July, 3; in August, 7. The following seven months, during which the remedy was used, showed a total of but thirteen—September having the largest number, four in all. The others were as follows: October, 2; November, 1; December, 0; January, 3; February, 3; March, 0.

In still another case equally encouraging results as to number were obtained. In the six months preceding the use of *Cocculus Indicus* the patient had 139 convulsions; the largest number in any one month being 47, the next largest 35, the smallest 8. The six months following the prescription showed an aggregate of but 72, the largest number in any one month being 18, the next largest 16, the smallest 7.

In the following case it was thought necessary to abandon the use of the drug, owing to the increasing severity of convulsions, and a change in their character. The patient suffered from light attacks, oftentimes having as high as four or five in the day, but loss of consciousness was only temporary, and convulsive movement not marked. As in a preceding case convulsions were almost completely arrested for a time, but to recur with great severity and to assume the character of the grave form of epilepsy.

An experience in the case of a boy, age 16, who had been under the bromide treatment, seems to confirm the observation of Prof. Hammond as to the increased severity of convulsions consequent upon the substitution of *Picrotoxine*. With this patient the drug was discontinued after a brief period, bromide mixture being resumed with gratifying results.

HOW DOES THE REMEDY ACT?

If we accept the view that the essential condition of an epileptic attack is primary vascular spasm by which sudden localized anæmia of the brain is produced, a satisfactory explanation of the action of *Cocculus Indicus* is, that as a vaso-motor paralyzer, its influence is to keep the cerebral blood vessels in a state of permanent relaxation, thereby preventing the occurrence of anæmia. Experimental observation has demonstrated that its influence is chiefly exerted upon the cardiac and vascular systems.

TO WHAT CLASS OF CASES IS IT ADAPTED?

The conclusion reached from my own experience is that those patients in good bodily health, whose convulsive seizures are accompanied by maniacal excitement, seem to be the ones most likely to receive benefit.



